

MEETING MINUTES, OPERABLE UNIT 5 CORRECTIVE MEASURES STUDY/FEASIBILITY STUDY
(CMS/FS)

- 1 The meeting was held on November 17, 1994 to present the upcoming strategy for the CMS/FS for Operable Unit 5 (OU 5) Copies of the presentation materials are attached
- 2 The Remedial Investigation (RI) / FS was updated with respect to Implementation of Technical Memorandum #15, Addendum to the Field Sampling Plan The drilling for the RI should be completed by Thanksgiving with groundwater monitoring continuing for 1 year The geotechnical program is expected to be done by Christmas
- 3 An overview of the OU 5 IHSSs was presented with the closure strategy of Presumptive Remedy for the Original landfill (IHSS 115/196) and the traditional CMS/FS for all the other IHSSs
- 4 The strategy for the Original Landfill was presented
 - The Presumptive Remedy components are containment and control management The six components specified in the landfill presumptive remedy are cap/cover, groundwater diversion/collection, surface water diversion, institutional/access controls, leachate collection, and landfill gas venting The leachate collection and the landfill gas venting are not applicable to this case In the Presumptive Remedy Report, a limited number of alternatives will be developed and screened with respect to effectiveness, implementability, and relative cost
 - The Geotechnical Boring Program included an evaluation of data sufficiency which identified geotechnical data needs necessary to conduct a slope stability analysis, select a preferred presumptive remedy alternative, and to prepare conceptual grading plans The geotechnical boring program includes 19 borings with approximately 200 geotechnical analyses (e.g., shear testing, plasticity, etc.) and is scheduled to begin on November 28, 1994
 - The data collected during this field effort will be used to conduct the slope stability analysis and prepare conceptual grade plans It is currently estimated that the volume of fill material (structural fill plus the barrier layer) required at the landfill is approximately 300,000 cubic yards A preliminary grade plan has been completed and will be modified as necessary to adjust for slope conditions
 - J. Schieffelin, CDPHE, asked what the estimated volume of fill material is currently present at the landfill site? *There is an estimated 2 million cubic feet of non-native material*
 - J. Schieffelin, CDPHE, asked if capping the landfill was feasible? *Yes, the geotechnical field work and the subsequent slope stability analysis is being conducted to obtain data to determine how the landfill should be loaded with fill and cover material to ensure a stable landfill cap/cover There are several cap/cover scenarios, and the geotechnical program will guide the alternative evaluation and selection process This will be summarized in the Presumptive Remedy Report*
- 5 The upcoming deliverables and the tentative schedule were presented
 - A Detailed Screening of Alternatives (DSA) - level analysis of the landfill presumptive remedy will be available in January 1995 The geotechnical data are required to evaluate the effectiveness of each alternative An EPA/CDPHE/DOE meeting was suggested to review the findings up to that point

ADMIN RECORD

A-OU05-000627

- The Draft Presumptive Remedy Report will be submitted to the agencies in March 1995. This report will incorporate the geotechnical data and provide a Detailed Analysis of Alternatives (DAA)-level analysis.
 - The Final Presumptive Remedy Report will be submitted in April 1995.
 - K Muenchow, DOE, suggested that in January/February the team may want to accelerate the closure of the landfill by breaking it out from the rest of the FS.
 - B Lavelle, EPA, clarified the point that a limited ARARs analysis is all that is needed to justify using the Presumptive Remedy Approach for the landfill. Look at where Maximum Concentration Levels (MCLs) are exceeded in groundwater. Document this in the Presumptive Remedy Report.
- 6 The Borrow Source Suitability Evaluation was discussed. EG&G has been looking for potential sources of weathered claystone that could be used for fill and cover material at the OU 5 landfill site as well as the landfill at OU 7. The findings will be submitted soon in a borrow source report. One offsite and two onsite sources have been identified.
- B Lavelle suggested coordinating with onsite Natural Resource personnel to avoid being blindsided by cost or other problems.
 - J Schieffelin, CDPHE, asked if the whole landfill would be capped? *Currently it is assumed that the entire landfill area will be covered. It may be possible to consolidate the material south of the road to the main part of the landfill as well as some of the areas to the east and west. Consolidating landfill wastes will lower the fill/cover material requirements and will keep the cover as far away as possible from the creek. The Presumptive Remedy Report will evaluate the areal extent of the landfill cover.*
 - J Schieffelin, CDPHE, asked if a "footprint" would be presented in the Presumptive Remedy Report? *No, the "footprint" will be presented in the Slope Stability Report instead because it represents a portion of the design which is subject to change.*
 - B Lavelle asked if this was waiting on the geotechnical data results? *Yes, for the alternative evaluation and selection process.*
 - K Muenchow, DOE stated that a vegetative cover is also being looked at as an alternative.
 - J Schieffelin, CDPHE, asked if the areal size was still being determined? *Yes, a "worst case" grading plan has been drafted (see attachments).*
 - J Schieffelin, CDPHE, asked if the portion of the South Interceptor Ditch (SID) within the landfill would be sacrificed? *Yes, but only that part which runs through the landfill. The EG&G Surface Water Division has been updated to ensure that sitewide surface water drainage is considered.*
 - J Schieffelin, CDPHE, asked whether enough material could be consolidated so the SID could stay intact? *It is unlikely since, in addition to the cover, some type of groundwater barrier would be installed at the toe of the landfill.*
 - K Muenchow stated that plant drainage above the landfill would have to be controlled so as not to impact the cap.

- M Yaskanin, Rust, stated that controls during construction will also be specified to control erosion
- 7 The other OU5 IHSSs were discussed. Upcoming deliverables include Technical Memoranda (TM) # 1 and # 2. TM #1 and TM # 2 cannot be finalized until the results of the Baseline Risk Assessment (BRA) are available. Until the BRA results are available, 10^{-6} Programmatic Preliminary Remediation Goals (PPRGs) will be assumed. A snapshot of "significant" contaminants was presented (see attachments)
- The anticipated outcomes of the DSA were presented (see attachments)
 - There are several expected outcomes of the DSA for remediating the surface and subsurface soils at IHSSs 133 1 through 133 4. They are: Excavate/stabilize or solidify/dispose, In situ stabilization/solidification, Cap/cover, and Containment cell. The RI report will provide data regarding whether groundwater comes in contact with the ash and whether this provides a conduit for movement of the contamination from the ash into the groundwater.
 - The presence of groundwater at OU 5 is very sporadic, so source control and monitoring will be a likely option. The groundwater at the C-Ponds will also be remediated through source control and monitoring/management per the Pond Water IM/IRA.
 - The surface soil at IHSS 209 is expected to be "No Further Action (NFA)". Aroclor was detected, however, the maximum concentration detected is below TSCA levels. The surface soil at IHSS 133 5 and 133 6 are also expected to go NFA. There is approximately 6 drums of debris/rubble located near these IHSSs that may warrant an accelerated cleanup action.
- 8 Accelerated actions apply to situations where surface cleanup will suffice. The area between IHSS 133 5 and 133 6 has surficial debris/rubble that is contaminated and is a candidate for an accelerated action. EG&G will develop a proposal that will be submitted to the agencies detailing how the material will be decontaminated, stored, and/or disposed. A Proposed Action Memorandum could be used as the mechanism to propose the action. Both EPA and CDPHE were in favor of this accelerated action.
- 9 EG&G has looked at the ash material located within IHSS 133 1 through 133 4. Contaminant concentrations are much lower than concentrations of the same contaminants in the landfill. While the subsurface soil contaminants are not above the Construction Worker 10^{-6} PPRGs, they may be a possible source of groundwater contamination. EG&G presented the idea of putting the solidified/stabilized ash material into the landfill prior to it being capped. (The results from the EG&G encapsulation treatability study would be available in June 1995 and the cementation treatability study results would be available in September 1995.)
- J Schieffelin, CDPHE, expressed concern about putting additional material into the landfill since it was already situated on an unstable slope and the landfill may not be the most optimum location. He suggested that a long term programmatic approach for the entire RFETS be examined for these purposes, rather than just looking at each individual OU.
 - M Yaskanin, RUST, addressed J Schieffelin's concern regarding the stability of the slope. The project will evaluate the mechanisms and pathways leading to slope instabilities. Different grading plans will be examined to determine which "loading scenarios" will result in a stable cover.

- B Lavelle, EPA, asked when will the Risk Assessment information be available to tie into the DSA? *Approximately 2 months prior to issue of the draft report for internal review (May 1995)*
Therefore, we may know the results of the BRA as early as in March or April of 1995. The DSA cannot be finalized without the BRA information
 - M Hogg, ICF Kaiser for EG&G, asked J Schieffelin if his main concern with moving the ash pit material into the landfill was the radioactive contamination?
 - J Schieffelin, CDPHE, replied that no matter what the contaminants are, we should be looking at the site as a whole
 - B Lavelle, EPA agreed that no one is really looking at the big picture
- 10 The next meeting on the OU5 CMS/FS will be on January 26, 1995 at 8 30 a m The location will be announced at a later date

**Meeting Agenda - OU5 CMS/FS
November 17, 1994**

I. Introduction

RI/FS Program Update
Strategies for Future FS Tasks
Review of OU5 IHSSs

II. Original Landfill

Presumptive Remedy Components
Geotechnical Boring Program
Presumptive Remedy Report
Borrow Source Suitability Evaluation

III All Other OU5 IHSSs

Snapshot of "Significant" Contaminants
Anticipated Outcomes of DSA
Advantages/Disadvantages of Remedial Alternatives

IV. Summary

ATTENDANCE LIST
for
OU5 CMS /FS Review Meeting

November 17, 1994

	Name	Organization	Title	Phone/Fax
1	Bob Cygnarowicz	EG&G	Feasibility studies	966-9601 / 966-4000 x 74
2	Kent Krumvieda	RUST	Engineer	469-6660 / 469-6665
3	Mark Yashanin	RUST	Engineer	694-6660 / 694-4410
4	Andrew D Ellison	Medcraft & Eddy	Sr Hydrogeologist	(214) 752-8725
5	Doug Dennison	ASI	Proj Mgr	980-0036 / 980-1206
6	Scott Howdwell	EG&G	OU5 FS/TS	966-8748
7	Doreen Hoskins	PRC	Cerologist	303-295-1101
8	Brian Schuller	PRC	Hydrogeologist	295-1101
9	Carol Bicher	EG&G	OU5 Project Manager	966-9150
10	FRAZER LOCKHART	DOE	Director, ERMD	966-7846 / 4871
11	Kurt Muench	DOE	DOE/ER	966-2184 / 4871
12	Roberta Sato	MSE	Project Manager	415-591-9300 / 3917
13	Marylee Hagg	IC&X	Risk Assessor	966-8716 / 8663
14	Rutha Randall	EG&G	Risk Assessor	966-6924
15	Joe Schieffelin	CDPHE		692-3356
16	Bonnie Caville	EPA	RPM	294-1067 / 7559
17	Meloni, Araceli	CDPHE		692-3415

OVERVIEW OF IHSSs

IHSS NUMBER	DESCRIPTION	CLOSURE STRATEGY
115/196	ORIGINAL LANDFILL	PRESUMPTIVE REMEDY
133 1 - 133 4	ASH PITS	CMS/FS
133 5	INCINERATOR AREA	CMS/FS
133 6	CONCRETE WASH PAD	CMS/FS
142 10 -142 11	C PONDS	CMS/FS
209	SURFACE DISTURBANCES	CMS/FS

ORIGINAL LANDFILL

- Presumptive Remedy
 - Containment and Control/Management
 - ▶ Landfill Cap/Cover
 - ▶ Ground Water Diversion/Collection
 - ▶ Leachate Collection (NA)
 - ▶ Surface Water Diversion
 - ▶ Landfill Gas Venting (NA)
 - ▶ Institutional/Access Controls
- Geotechnical & Design Criteria
 - ▶ EDS Identified Geotechnical Data Needs
 - ▶ Geotechnical Boring Program

LANDFILL ACTIVITIES

- Geotechnical Boring Program
 - Completion of 19 Borings
 - Collection of Geotechnical Samples
 - Performance of Approximately 200 Geotechnical Analyses
 - Field Activities Start on November 28, 1994
- Slope Stability Analysis
- Conceptual Grade Design

ORIGINAL LANDFILL

(Continued)

- Presumptive Remedy Evaluation & Selection
 - EPA/CDPHE Review Meeting
 - DSA Level Analysis
 - January, 1995
 - Draft Presumptive Remedy Report
 - DAA Level Analysis / Selection of Alternative
 - March, 1995
 - Final Presumptive Remedy Report
 - DAA Level Analysis / Selection of Alternative
 - April, 1995
- Borrow Source Suitability Evaluation
 - Report Content and Recommendations
 - Future Work

OU5 IHSSs PCOCs by Media

IHSS	Media	PCOCs ^a
133 1-133 4 Ash Pits	Surface Soils	Aroclor Uranium
	Subsurface Soils	Uranium
	Groundwater	Radium Uranium
133 5 Incinerator Area 133 6 Concrete Wash Pad Area	Surface Soils	Aroclor (18 ppm)
	Debris/Rubble	Radioactivity (6,637 cpm)
142 10 Pond C1 142 11 Pond C2	Surface Water	Pentachlorophenol Americium Uranium
	Groundwater	Radium Uranium
209 & Other Soil Disturbance Areas	Surface Soils	Aroclor (52 ppm)

^aPCOCs are contaminants of concern found to be present at concentrations greater than 10⁻⁶ PPRGs
 Note: The maximum detection of Manganese in the Ash Pits and C Series Ponds groundwater exceeded the 10⁻⁶ PCOC value The source of Manganese is expected to be geochemical in nature, however

OVS IHSSs Anticipated Outcomes of the DSA

IHSS	Media	PCOCs ^a	Remedial Alternatives
133 1-133 4 Ash Pits	Surface Soils	Aroclor Uranium	Excavate/S&S/Dispose Excavate/S&S/Store In-Situ S&S Cap/Cover Containment Cell
	Subsurface Soils	Uranium	
	Groundwater	Radium Uranium	Source Control & Monitoring
133 5 Incinerator Area 133 6 Concrete Wash Pad Area	Surface Soils	Aroclor (18 ppm)	NFA (Aroclor < TSCA limit)
	Debris/Rubble	Radioactivity (6,637 cpm)	Accelerated Action
142 10 Pond C1 142 11 Pond C2	Surface Water	Pentachlorophenol Americium Uranium	Source Control & Monitoring Pond Water IM/IRA
	Groundwater	Radium Uranium	Source Control & Monitoring
209 & Other Soil Disturbance Areas	Surface Soils	Aroclor (52 ppm)	NFA (Aroclor < TSCA limit)

^aPCOCs are contaminants of concern found to be present at concentrations greater than 10⁻⁶ PPRGs

Note The maximum detection of Manganese in the Ash Pits and C Series Ponds groundwater exceeded the 10⁻⁶ PCOC value The source of Manganese is expected to be geochemical in nature, however

Table 3 1
Rocky Flats Operable Unit 5
Comparison of Contaminant of Concern Concentrations to PPRGs
IHSS 133 1-133 4 - Ash Pits

Contaminant of Concern	Units	Maximum Concentration Surface Soil	Residential Soil PPRG	Maximum Concentration Subsurface Soil	Construction Worker Soil PPRG	Maximum Concentration Seep Sediment	Residential Soil PPRG
Acenaphthene	µg/kg	Not Sampled	16,500,000	N/A	N/A	N/A	N/A
Acetone	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor-1254	µg/kg	180	83.2	N/A	N/A	N/A	N/A
Benzo(a)anthracene	µg/kg	Not Sampled	877	N/A	N/A	N/A	N/A
Benzo(a)pyrene	µg/kg	Not Sampled	877	N/A	N/A	N/A	N/A
Cadmium	mg/kg	3.1	137	N/A	N/A	N/A	N/A
Chromium	mg/kg	24.4	N/A	165	8,870	N/A	N/A
Copper	mg/kg	Not Sampled	1,100	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	µg/kg	Not Sampled	877	N/A	N/A	N/A	N/A
1,1-Dichloroethene	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Fluoranthene	µg/kg	Not Sampled	11,000,000	N/A	N/A	N/A	N/A
Fluorene	µg/kg	Not Sampled	11,000,000	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	µg/kg	Not Sampled	877	N/A	N/A	N/A	N/A
Manganese	µg/kg	Not Sampled	N/A	N/A	N/A	3,520	182
Mercury	µg/kg	0.12	82.3	N/A	N/A	N/A	N/A
Naphthalene	N/A	Not Sampled	--	N/A	N/A	N/A	N/A
Pentachlorophenol	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Pyrene	µg/kg	Not Sampled	8,230,000	N/A	N/A	N/A	N/A
Silver	µg/kg	6.3	1,370	N/A	N/A	N/A	N/A
Strontium	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Tetrachloroethene	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Trichloroethene	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Zinc	mg/kg	85.6	82,300	N/A	N/A	N/A	N/A
Americium-241, total	N/A	Not Sampled	N/A	N/A	N/A	N/A	N/A
Plutonium-239/240, total	pCi/g	Not Sampled	N/A	3.2	301.0	N/A	N/A
Radium-226	pCi/g	Not Sampled	N/A	N/A	N/A	8.4	0.476
U-233/234, total	pCi/g	47	44.7	N/A	N/A	620.7	2.98
U-235, total	pCi/g	2.38	0.173	2.3	17.3	50.94	2.98
U-238	pCi/g	209	46.0	12	4,220.0	2,728	2.98

Attachment 2
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Table 3 1
Rocky Flats Operable Unit 5
Comparison of Contaminant of Concern Concentrations to PPRGs
IISS 133 1-133 4 - Ash Pits

Contaminant of Concern	Units	Maximum Concentration Seep Water	Residential Ground Water PPRG	Maximum Concentration UHSU Ground Water	Residential Ground Water PPRG
Acenaphthene	N/A	N/A	N/A	N/A	N/A
Acetone	µg/l	Undetected	3,650	N/A	N/A
Aroclor-1254	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A
Cadmium	N/A	N/A	N/A	N/A	N/A
Chromium	N/A	N/A	N/A	N/A	N/A
Copper	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene	µg/l	Undetected	0.0677	N/A	N/A
Fluoranthene	N/A	N/A	N/A	N/A	N/A
Fluorene	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	N/A	182
Manganese	µg/l	N/A	N/A	3,520	N/A
Mercury	N/A	N/A	N/A	N/A	N/A
Naphthalene	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	N/A	N/A	N/A	N/A	N/A
Pyrene	N/A	N/A	N/A	N/A	N/A
Silver	N/A	N/A	N/A	N/A	N/A
Strontium	N/A	N/A	N/A	N/A	N/A
Tetrachloroethene	µg/l	Undetected	1.63	N/A	N/A
Trichloroethene	N/A	Undetected	--	N/A	N/A
Zinc	N/A	N/A	N/A	N/A	N/A
Americium-241, total	N/A	N/A	N/A	N/A	N/A
Plutonium-239/240, total	N/A	N/A	N/A	N/A	N/A
Radium-226	pCi/l	N/A	N/A	8.4	0.476
U-233/234, total	pCi/l	N/A	N/A	620.7	2.98
U-235, total	pCi/l	N/A	N/A	50.94	2.98
U-238	pCi/l	N/A	N/A	2,728	2.98

— = COCs less than Programmatic Risk-Based Preliminary Remediation Goals (PPRG)

— = Data was not presented in PPRG document

— = COC Not applicable for this medium

PPRG = Programmatic Risk-Based Preliminary Remediation Goal

UHSU = Upper Hydrostratigraphic Unit

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pg 5/8

Bonnie - coordinate w/ Ontario Natural Resource ppl. so not blindsided by cost or other problems
- Report also looks @ off-park areas

Marilyn - is a LLEPA/COH need to see for FS process is an ARAR's analysis

Bonnie - yes, where MCLs exceeded in groundwater

Document in FS Prelim Report

Joe - are we capping the whole landfill?

DOE - yes, but we are looking at moving rubble up north area of SID and placing toe of landfill along

SID or Road to reduce amount of fill & to stay away from WC as much as possible

- will also look at bringing in east west edges in report

Joe - will you look @ footprint in Prelim

646 - yes but it will not be shown in Prelim

Report but in the Slope Stable Report

Bonnie - waiting on geotech data

646 - for alternative selection

Kurt - also looking @ vegetation cover

Joe - no accuracy still ~~needed~~

determining size

Kurt - you're looking at worst case or

largest assumed extent

Ecology

Kurt - currently it is expected that the

slope is threatening the WC habitat

& probably need to do something

Joe - so the SID will be sacrificed

Ed - got the part that runs through the landfill, the upper part.

we are working w/ SW to ensure

plant drainage is considered

Joe - could you leave the SID in place

if

Cathy - I wouldn't go that far

Kurt - above landfill - drainage may

need to be controlled so as

not to impact the cap

Kurt - controls during construction to control erosion

TIL all other HSS's

Snapshot of "Significant Contaminants"

took at see copies of slides

Anticipated Outcomes of DSA (T112)

see copies of slides

pg 8/8

Vive - GW thought process

- cont. in GW
- now looking at it
- why are you s'

Rust - evaluating mechanisms & pathways

Vive -

Bonnie - when does Risk Assessmt info be available to tie into DSA

Ciggy - \approx 2 mos before draft (May)
so around April

Rust - cannot finalize DSA w/o Rt info.

Marylee - Is your main concern w/ moving aspects? R&Ds

Joe - no - doesn't matter what cont are

Bonnie - I agree no one is looking at
Sitewide picture

Kurt -

EPA - Bonnie Lavelle

CDH - Joe Schefflin

DOE - Kurt Muenchow

See comment
on note number
of next survey

pg 14/8

IHSS 133.516 - would like to do an

accelerated action to move debris/subtle

(< 1/2 dozen drums) to the landfill

Kurt - any problems generating a proposal

Bonnie - good idea - good example of an early action

IHSS 133.1, 2, 3, 4 - in site alternatives

have volume growth

- possibly a cup after scraping top

10-12 inches

- source control for GW

- will have to study under FS

Joe - what is that stuff

Ciggy - contaminated metal debris, glass

Joe - is rad on or in

Ed - on

Joe - can we just decom it

Ciggy - maybe

Kurt - our proposal would include

Frangis - corroded metals need some kind of scrubbing

Kurt - will propose an accel action

Ciggy - is it a PAM

Kurt - What type of mechanism / procedure

Frangis - we pretty much agreed to PAM for IHSS

Ciggy - not really in an IHSS

Joe - IHSS boundaries are gray

Attachment 4
page 4 of 5

pg 7/8

John - Can do a 4 page PAM

IHSS 133.1 & 133.2, 3 & 4

Ciggy - Rad metal in ash pits < Rad metal

in the landfill

Rust (Kurt) - consider worker 10⁻⁶

looking at

Kurt - top 10 cm surface soil

Rust - chance for a PAM for ash pits

after we get through the Dst

Joe - You're going to have a problem

putting ash in landfill

Ciggy - We are going to do an ^{next phase}

encapsulation Treat Study

& tested

TCLP

would move it encapsulated

Joe - doesn't seem right to put more

waste, even treated into an

unstable landfill

Rust - The landfill will be stable

backing by a high safety factor

Joe - are we picking the right place

to place to dispose - Strip back &

look @ site-wide problems for

long term problems

Geotech Boring Program pg 2/8

-
-
-
-
- Field Act Start Nov 28, 94

Slope Stability Analysis

2 or 3 grading plans, and of full estimate
a preliminary grade plan (scenario)
has been completed & will be
modified as needed to adjust for
slope,

300,000 yards fill estimated

See - what is fully ^{11'} 2' M of 110,000 cu
- is capping the landfill even possible?

yes, but the steepness of the slope
will be studied under the FS
yes, they are difficult conditions
in many cases, but the full
will be used to stabilize

there are several scenarios & the
geotech programs will guide
the alternative selection

→ Pres. Kennedy Report will summarize all this.

- Deliverables

- Pres Rem Eval & Selection
- EPA / CDPHE Review Mtg
- DSA Analysis
- Jan 1995

good time to have a meeting
to look over project report
however, geotech data will
not yet be available

- Draft Pres. Kennedy Report
- DAA Level Analysis / Sel of Alt
- March 1995

- Final Pres. Kennedy Report

- DAA Level Analysis / Selection of
Alternatives

- April 1995

Kent in Jan/Feb may want to review
breaking out Aug. landfill for closure

- Review Source Sustainability Eval

- 3 onsite areas w/ unweathered
limestone were identified -
add data, would be reqd.
- A report outlining this will be out
soon

pg 3/6

November 17, 1994 CUS CMS/ES Strategy Mtg pg 1/8

I introductions

RI/ES Program Update

RI drilling to be done by THKs

Geotech boring - by V-mas

with level instruments

deep borehole locations & status

geotech borings to become piezometers

Donner -
show what
we are
doing w/
deep wells
& piez

II Original Landfill

Pres Remed Comp

Containment & Control Mgmt

- Landfill Cap/Cover
- GW Diversion/Collection
- Leachate Collection (W/4

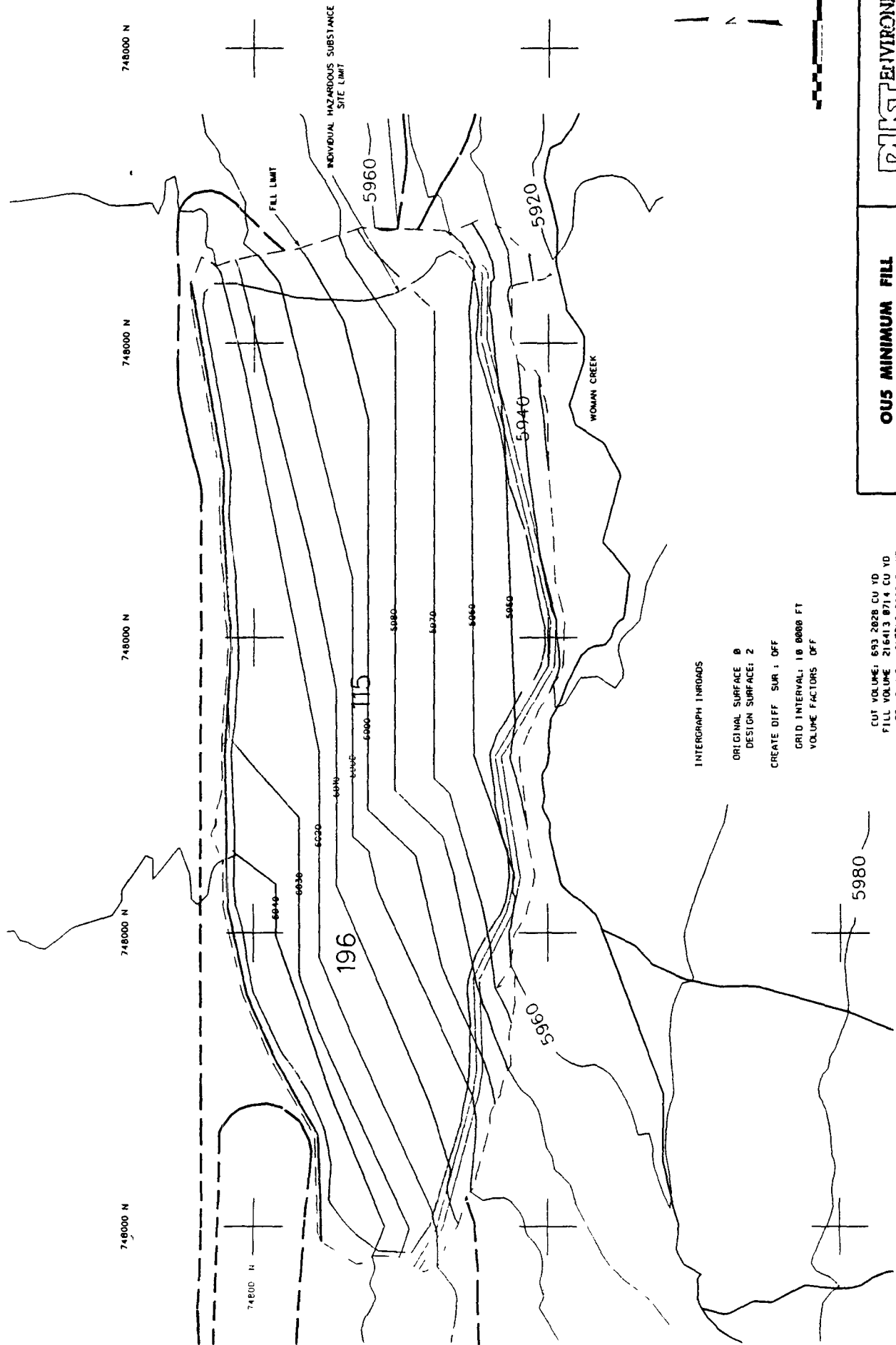
will assess a range of alternatives
& cost

in order to

Geotechnical & Design Criteria

to evaluate geotech program
to support

- EDS Identified Geotechnical Data Needs
- Geotech Boring Program



RUST ENVIRONMENT & INFRASTRUCTURE

**OUS MINIMUM FILL
CONDITION**

CUT VOLUME: 693 2028 CU YD
FILL VOLUME: 216413 8714 CU YD
NET VOLUME: 215719 8686 CU YD

INTERGRAPH INROADS

ORIGINAL SURFACE: 0
DESIGN SURFACE: 2

CREATE DIFF SUR: 1 OFF

GRID INTERVAL: 10 0000 FT
VOLUME FACTORS: OFF